



## Assignment 2 Briefing • Thurs 5<sup>th</sup> May 2016, CIC

# Crafting Participatory Data Stories

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**MDSI is all about data and innovation. In DVN, we are focusing on the visualisation of that data, and how such representations can shape new narratives (plausible accounts, possibly insightful) about what's going on in the world — or what could happen.**

You have now been introduced to the concept of **Knowledge Art** as a particular way of bringing together the visualisation of data and ideas — the skilful blending of narrative, aesthetics, sensemaking, ethics and improvisation. This way of working is **inherently participatory** — a way of working to help the stakeholders clarify their problem, or craft the data stories together which they can see in data — or which they hope to see when the analysis has been done.

In this exercise we may also bump up against the fact that **analytics are inherently political**: any analysis may end of influencing minds; many analyses are commissioned by people with agendas, and they want data to back their views.

In this assignment you will get the chance to practise being a 'knowledge artist', and experience a little of what it feels like to be a Data Advocate, commissioned by an advocacy group. Hopefully you will find this a fun fusion of connected and creative intelligence!

### The role play scenario

The setting is upstream in the analytics project lifecycle: early consultation with a client to sharpen up requirements and what they are hoping for as an outcome. So, unlike other MDSI assignments, this one is not about conducting a real data analysis and generating a polished visualisation and pitch.

It's a role play, with some background information below to set the scene and give you ideas to discuss, and anything else you can make up to fit the scenario (it's a fiction after all).

This is about how you practise knowledge artistry with pen and paper, and any optional printouts or software tools you choose to bring.



# TranSyd 2030 Scenario: Data Advocacy for Transport

It is 2020, and following widespread Open Government best practice, “TranSyd” is consulting with stakeholders about its development plans, which includes the release of data. What should Sydney’s West look like in 2030?

Unfortunately, recent motorway developments have already reached capacity and congestion is essentially at the same levels as in 2015. The reasons for this are of course contested. **A key decision is whether to expand services to the growing west of Sydney by prioritising rail, or make further road investment but aiming for 50% driverless, ride-sharing vehicles.**

There are already many public service datasets available (health, education, policing, employment, etc). The TranSyd datasets released as part of this particular consultation are:

**Travelcard data:** journey times, dates and mode of transport 2015-2019 from anonymised and suitably masked travelcard logs from the whole of NSW into/out of Sydney.

**Most common train journeys:** by demographic profile, 2000-2019

**Road traffic accidents:** including fatalities and injuries graded by seriousness, victim age, location and vehicle type, 2017-19

**Road usage** from motorway sensors 2000-19

**Driverless vehicle usage**, 2018-19

**Citizen attitudes** to the use of conventional cars vs public transport (Surveys 2000-19)

**Citizen attitudes to driverless vehicles** survey 2017-19

**Costing projections** for each option to increase current capacity by 50% by 2030.

**Availability of real estate for car-parking**, projections 2020-2030

With this data comes the requirement that stakeholder groups present evidence-based arguments to back their submissions to the consultation.

Three stakeholder groups are preparing their cases:

**SydEcoTrans:** a group of citizens and experts focused on making Sydney’s transport system as sustainable and ecologically friendly as possible

**Seniors1st:** a charitable foundation committed to the social and cultural integration of the elderly in society

**FutureBiz:** a commercial network whose priority is to ensure quality transport connectivity for the businesses of the future



# Rotating roles

Each 'consultation' will be 20mins, followed by 10mins debrief. The roles are:

- 1 Consultant Data Advocate
- 2 Clients (one of whom also videos the session on consultant's phone)

Take 5mins break. The consultant role then rotates.

*<group members and roles>*

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## Briefing for the Data Advocate role

As one of the new breeds of *Data Advocate*, you have been hired by one of these groups to represent their interests. They are contracting you to analyse the TranSyd data, in conjunction with other datasets they have, and design engaging visualisations to help them (and they hope the wider public) make their arguments in the most compelling way possible.

### Prepare for the Consultation

Ensure you have read the MDSI Guide to Knowledge Art.

The client has some priorities they want to champion as specified in their briefing. How can you help them make their case effectively using the available data, and any other data you have access to? (*you can invent some other datasets that might be relevant*)

For the meeting, think about how *Knowledge Artistry* can be used to add value to the dialogue — introduce visual representations of any sort, e.g.

- to help clarify “the system” being design
- to help clarify the key issues, options and arguments
- to help envision visualisations that the project might deliver
- to help clarify the merits of different options
- to help with planning the project

It’s your decision whether to start with a blank page and see what the clients have to say, or whether to prepare some mockups to bring for discussion if you already have some thoughts on visualisations. But might this close down options prematurely? You can also introduce any software tool or website you think will help.

**Note: please ensure that your phone has enough space to record 30mins video. Afterwards we will ask you to upload\* this to an unlisted UTS YouTube account for review in conjunction with your reflective report. Only you and the MDSI academic team will have access to this unless you choose to share it.**

\* <https://help.online.uts.edu.au/getting-your-videos-onto-youtube-and-then-into-utsonline>



# Briefing: SydEcoTrans

**SydEcoTrans is passionate about advancing the sustainable transport concerns of its members, who range from concerned citizens to professionals in diverse fields.**

## Briefing for Data Advocate

Sydney and other cities have shown that increased investment in trains leads to increased usage, which appears to have specific benefits:

1. improved transit times
2. reduced road congestion
3. reduced pollution hotspots
4. improved biodiversity

Our hoped for deliverables:

- Demonstrate that any or all of the above benefits hold for Sydney based on historic data
- Projected impacts based on either the road or rail investment option, to demonstrate that rail is the superior option
- An interactive visualisation tool that we can use to explore the data ourselves (or with your support), which we might also use to make our presentation to TranSyd more persuasive.
- We are also keen on static infographics to summarise the key messages for the public, and possibly simple interactive visualisations on our website, as an advocacy tool to engage the public. We want citizens to explore the implications for their own lives.

We can also provide additional datasets if these will assist:

- Evidence that the public is not ready for driverless cars, survey 2018-19
- Evidence that driverless cars are as environmentally damaging as conventional, UTS Transport Research Centre reports 2018-19
- Road traffic accident data including location and vehicle type, 2017-19
- Locations of pollution hotspots across Sydney, 2000-20
- Most common train journeys by citizens, by demographic profile, 2000-2019
- Sydney biodiversity sensor network data, 2019-20



# Briefing: Seniors1st

**Seniors1st is a charitable foundation committed to strengthening the social and cultural integration of the rapidly growing elderly population in urban society.**

## Briefing for Data Advocate

Other cities have shown that increased investment in public transport leads to increased usage, which is correlated with the following benefits of particular importance to us:

1. improved mobility for senior citizens
2. improved mental health (based on hospital data) attributed to more face-to-face contact
3. reduced road traffic injuries and deaths
4. reduced assaults involving seniors

We would like to know if we can make a similar case for Sydney.

Hoped for deliverables:

- Evidence that any or all of the above benefits seem to hold for Sydney
- An interactive visualisation tool we can use to explore the data ourselves, and support our presentations. We're imagining some kind of interactive city map display that we can control
- We're also keen on static infographics, and possibly simple interactive visualisations on our website, as an advocacy tool to engage the public. What are the implications of TranSyd's plans for me?

What can the Data Advocate suggest?

We can provide some additional datasets which we hope the Data Advocate can integrate:

- Locations of sheltered housing for the elderly, 2015-2020
- Approximate residential density by age bracket, 2017-19
- Survey data on most popular recreational past-times by demographics, including age, 2017-2019
- Senior Citizens Health and Wellbeing Survey Data including approx. location of respondents, 2000-20



# Briefing: FutureBiz

**FutureBiz is a commercial network whose priority is to ensure quality transport connectivity for the businesses of the future.**

## Briefing for Data Advocate

The leading thinking on how cities will serve creative, knowledge-intensive businesses argues that:

1. Businesses want highly walkable urban centres to create the informal professional networks that power innovation hubs
2. Long commutes are not attractive: 9-5 work is passé, and life and work are interwoven
3. Staff want to be online and productive wherever and whenever they are
4. Staff want to minimise their ecological footprint in all aspects of their lives, and are attracted to cities which evidence their green credentials.

First we want to examine the data for our own understanding — we're not sure which option is better for our members. Then we need to bring this thinking to the TranSyd consultation:

- Is the road or rail option superior overall, or are there tradeoffs?
- Can either option be improved to increase performance?

Our members are able to provide some additional datasets:

- Business impact analysis from Perth following similar consultations, which concluded that trains are superior. But its geography is different to Sydney
- Projected business types for western Sydney 2020-30
- Futures report on the envisaged speed, emissions and capacity of driverless vehicles 2020-30
- Futures report on the envisaged performance and capacity of trains, 2020-30





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